THE BEETLE AND SPIDER FAUNA OF MEADOWS AFFECTED BY TRAFFIC POLLUTION—(*Notice.)* The comparative effects of heavy versus light motor traffic on the numbers and types of beetles and spiders were investigated. Meadows chosen for the study were morphologically and topographically similar. Three were adjacent to a very busy road and 2 to a little-used road. The fauna were examined at the edge and in the interior of each meadow and the meadows on the busy road were then compared with these on the other road.

The numbers of species and specimens of Carabidae were significantly lower (Wilcoxon test < 0.05) at the edges of the meadows on the busy road than at the edges of those on the little-used road. While the Staphylinini showed no reduction in the number of species or individual specimens observed there was a reduction in the number of species of the Araneae group (Wilcoxon test > 0.05).

Comparison of the number of individuals of species in the differently situated meadows revealed a reduction in the number of specimens of *Clivina fossor, Bembidion lampros, Amara communis, Ocypus olens, Lycosa pullata, Lycosa tarsalis* on the sites adjacent to the busy road. Whereas some species showed no demonstrable change, a few (*Pterostichus cupreus, Philonthus varius, Pachygnatha degeeri)* exhibited greater number of individual specimens on the sites adjacent to the busy road than on those near the rural road.

The Shannon and Weaver diversity index generally yielded a lower value for the border zone of the meadows on the busy road; there was no change observed for the meadows bordering on the rural road.

The presence or absence of lead within an animal carcass was taken as an indicator of motor vehicle pollution. Quantitative estimation of body content of lead was performed in three beetle species by flame spectrometry. Individuals of *Carabus auratus* and *Pterostichus cupreus* captured near the edge of the busy road showed a significantly higher level of body lead than those captured in the middle of the field. No significant differences in lead deposits were observed between specimens of *Ocypus olens* captured on the roadside and those captured at other locations in the meadow, perhaps due to the greater range of mobility of these insects. Oecologia (Berl.), 1974, 14, 327-351; R. Maurer, Univ. Zurich.